### Memorandum GOUNTY

Date:

August 31, 2005

To:

Honorable Chairman Joe A. Martinez

and Members, Board of County Commissioners

From:

George M. Burgess

County Manager

Subject:

Miami-Dade Water and Sewer Department Rate Structure

Miami-Dade Water and Sewer Department (WASD) has a long history of offering its customers some of the lowest water and sewer rates in the region. Rate increases have been few and far between even as the system has dramatically expanded its infrastructure; in fact, the average customer pays less today for water and sewer services than in 1998, when the Board first instituted its five year, no rate increase policy. Several factors of the recent past have made it imperative to alter the rate schedule, principal among them rising costs, bond obligations, long-term conservation trends, and under-priced rates.

In the Fiscal Year 2005-06 Resource Allocation Plan I submitted in June, the WASD budget included a revenue increase of 3.5 percent as a necessary counterbalance to rising operating and maintenance costs. I indicated in my budget message that prior to the September budget hearings I would submit for your consideration a multi-year rate increase plan to address capital needs as well. Staff has continued their analysis of the WASD budget over the summer, developing a number of strategies to minimize the impact of a needed rate increase. I have reviewed the various options and am recommending adjustments to the WASD rate schedule that are projected to generate an increase in departmental revenues of \$48.564 million (which will be budgeted at 95% in accordance with state law, for an increase of \$46.135 million), or twelve percent over what was included in the Proposed Resource Allocation Plan. Including the 3.5 percent already programmed in the proposed budget, the total increase in revenue generated by the recommended revised rates is \$61.539 million (\$58.462 at 95 percent), which is a 15.8 percent increase in revenues. These proposed rate adjustments will provide for a consistent, acceptable level of reserves over the next three years and phased-in facility improvements, while minimizing the impact to the average residential customer and to minimum level users.

The proposed adjustments for FY 2005-06 include the following:

- Elimination of the Equity Transfer to the General Fund by the end of FY 2005-06
- Retail rate adjustments including:
  - No per gallon water rate increase for "lifeline" customers (up to 3,750 gallons per month)
  - o Inclining water rate increases based on usage levels, ranging from five percent for the average user (currently 6,750 gallons per month), to twenty percent for the heaviest consumers
  - Inclining wastewater rate adjustments ranging from five to twenty percent, depending on usage levels
  - Monthly base rate ("meter" charge") increase for water and wastewater service of ten percent

- Wholesale rate adjustments representing a 24.6 percent increase for water and wastewater combined (but only an average 9.5 percent increase for end users), which will bring charges closer to WASD's actual incurred costs of service delivery
- Creation of a water and sewerage Maintenance Index tied to the CPI (U.S. City Average Rate, All Urban Consumers, Water and Sewerage Maintenance) and fluctuations in usage levels, to provide for greater revenue stability. We will be exploring fee adjustment options (for either quarterly or annual implementation) to retail customer bills beginning FY 2006-07). The index is estimated to result in total annual revenue increases of 5.5 percent, though rate increase may be lower. Additionally, we may examine using the index for wholesale customers as well.

The anticipated impact of the recommended changes for Fiscal Year 2005-06 to the average retail customer (defined as a user of 6,750 gallons) will be a monthly increase of \$2.55, or less than nine percent over the current average charge of \$28.76.

The remainder of this memorandum will explore major capital and operating expense drivers, our rate history, and the effects of successful conservation programs. Finally, this document will present additional detail regarding the recommended rate schedule adjustments.

### **EXPENSE DRIVERS**

Capital Costs

During the late 1980s and early 1990s, several legal actions were initiated by the Federal Environmental Protection Agency and the Florida Environmental Protection Agency against the County for alleged violations of various clean water legislation. The violations stemmed primarily from a long-term history of poorly maintaining the County's sanitary sewer system. As a result of these actions, the Board approved several consent decrees and settlement agreements that required the County to make major capital improvements to upgrade the sanitary sewer system. To finance these and other required capital improvements to the WASD utility system, the County issued more than \$1.3 billion of revenue bonds.

In addition to debt service requirements associated with enormous remediation efforts in the 1990s, WASD has been expanding system capacity and continually upgrading its treatment processes over the last decade. In 2003, the Board approved our continuing effort to improve the system by voting in favor of our Multi-Year Water and Sewer Capital Improvement Master Plans. The Master Plans include solutions to meeting demands for service over the next two decades, as well as providing compliance with regulations such as the Federal Safe Drinking Water Act, Federal Clean Water Act, Federal Consent Decree, State Consent Orders and Settlement Agreements. Implementation of the Master Plans requires adequate staffing for construction management, design, engineering, and planning services, as well as legal and administrative services. Due to insufficient revenues, WASD is in the process of scaling back its Multi-Year Capital Improvement Plan (CIP), eliminating nearly \$400 million in projects. The detailed, revised Multi-Year CIP will be presented for BCC adoption at a later date. The passage of the Building Better Communities general obligation bond program will provide some additional capital dollars, but will be primarily targeted to improving infrastructure in underdeveloped areas within the County, not maintaining the current infrastructure.

In terms of financial resource requirements, the effects of the various capital improvement programs have been striking. WASD currently pays in excess of \$125 million annually in debt service and low-interest loan payments. These obligations consume approximately one-third of WASD total system revenues. Annual debt payments are triple those of 1990, before many of the compliance expenses

were incurred, and double those of ten years ago when debt service payments required approximately one-fifth of annual revenues.

### **Bond Obligations**

These debt service figures have important consequences for WASD. Our utility system is governed by Ordinance No. 93-134, the "Master Bond Ordinance", that provides assurances to bondholders that the County will maintain the financial and operational integrity of the system. The rate covenants establish important benchmarks for financial and system viability, including that net operating revenues equal or exceed 110 percent of the principal and interest requirements of the outstanding primary bonds, and 100 percent of subordinate debt requirements. The Ordinance also requires the maintenance of an Operating Expense Reserve funded at levels equivalent to two months' operating expenses throughout the life of the outstanding bonds. In addition to the Master Bond Ordinance requirements, the system has various low interest rate loans from the State Revolving Loan Fund that require at least 115 percent of the subordinate debt requirements.

The system has always met these requirements and currently the outstanding revenue bonds and loans are highly rated (A, A1, A+) by three key rating agencies, Standard & Poor's, Moody's, and Fitch, respectively. Over the last ten years, the system's primary debt service coverage ratio has averaged close to 2.0 times coverage requirements; our current audited ratio is under 1.6 times coverage requirements. Our financial advisors, Public Financial Management (PFM), project continued downward trends in actual coverage.

To meet its financial obligations, PFM has noted that WASD has tended to underfund replacement and reserve (R&R) accounts over the past decade. The consultants have advised that, in addition to funding R&R at adequate levels (at least \$60 million annually) in the future, a significant amount of "catch-up" funding is required to address historical gaps. Our financial projections include future debt issuance to cover these needs.

### **Operating Costs**

In addition to the substantial challenge of meeting the capital requirements associated with a growing utility system, WASD also faces several upward trends in operating expenses. Commensurate with the creation of new capital infrastructure (as was required under the consent decrees and settlement agreements) is the demand for new maintenance programs and staffing. In recent years, several large expense categories, including energy, chemicals and personnel, have grown at rates far higher than inflation. As examples, because of new treatment requirements in our new North West Wellfield and at our water treatment plants, we are using greater levels of liquid caustic soda, potassium permanganate, and lime; compounding the impact have been substantial chemical price increases as petroleum costs have rippled through the chemical producing industry. Electrical, natural gas and diesel costs are at record levels. Importantly, labor costs (including those associated with negotiated COLAs and health insurance contributions), which represent nearly fifty percent of our operating expenditures, have been rising at a pace not balanced by rate adjustments.

### **RETAIL AND WHOLESALE RATES**

### Retail Rates

In 1998, the Board instituted a "Five-Year No Rate Increase Challenge" (R-229-98) that directed WASD to aggressively reduce operating expenses. Since that time, the Board has taken three significant actions that have impacted WASD system revenues. Before examining the impact of these actions it is

important to note that the definition of the "average" customer changes over time. In the early 1990's, the average customer was defined as a user of 10,000 gallons. By the late 1990's, the average customer was one using 7,500 gallons. Most recently, the average customer is best understood to be in the 6,750 gallon range. The implications of these changes, explored more fully in a following section, are significant to both WASD and its customers.

Beginning in October 2001, the Board approved a ten percent rate reduction for the average combined retail water and sewer service customer, which reduced the monthly water and sewer charges for the average retail customer by \$3.41 (from \$34.48 to \$31.07). Effective October 1, 2002, the Board instituted a new retail rate structure as recommended by a rate study task force made up of Commissioners, independent consultants, representatives from labor unions, county administrators, and WASD personnel. The new rate structure was designed to keep total revenues neutral, but it had the effect of further reducing the average customer's monthly charges 2.8 percent, or \$0.88 (from \$31.07 to \$30.19). Lastly, beginning in October 2003, the Board approved a one-year, six percent increase in revenues for the utility system that resulted in a \$1.95 increase in retail water and sewer charges for an average customer (from \$30.19 to \$32.14). Combined, these three actions have had the effect of increasing rates for the average user of 7,500 gallons by two percent from the rates in existence eight years ago. This statistic is in significant contrast to the nationwide average increase in charges for all urban consumers of approximately thirty percent over the same period.

### Wholesale Rates

In addition to providing water and sewer services for retail customers, WASD also provides wholesale drinking water and sanitary sewer services at bulk rates to fifteen municipalities. These services are provided under contract by terms that link rates through formulas to the cost of providing services, or to actions of the Board.

From October 1997 through September 2003, wholesale rates remained unchanged despite contract provisions for rate adjustments. Effective October 1, 2003, the Board authorized water charge increases for thirteen of the fifteen municipalities of \$0.08 per thousand gallons (from \$0.77 to \$0.85), or 10.4 percent. Wholesale water rates for the cities of Hialeah and Miami Springs were increased by only \$0.06 per thousand gallons (\$0.66 to \$0.72), or 8.6 percent. (Due to the location of the department's Hialeah Water Treatment plant, the cities of Hialeah and Miami Springs have lower rates because they do not share in the regional transmission and distribution water costs.)

The increases in FY 2003-04 for the wholesale customers were below those allowed by contract formula. For example, the calculated wholesale water costs for the thirteen municipalities was \$0.87 per thousand gallons, as opposed to the \$0.85 actual rate, while the wholesale water costs for Hialeah and Miami Springs were calculated to be \$0.81 per thousand gallons, as opposed to the approved \$0.72 rate. Wholesale sewer rates, at \$1.70 per thousand gallons, were in-line with the calculated sewer rates, with only a \$0.02 difference. It is important to understand that cities and municipalities charge varying rates to their retail customers for the recovery of water and sewer costs, only a small portion of which stems from WASD charges. Because WASD wholesale charges represent a limited portion of total costs passed on by municipalities (the typical range is from twenty-five to forty percent), wholesale rate increases have a reduced impact on customer bills.

### **CONSERVATION**

Across the nation and here in South Florida, per capita water consumption has dropped dramatically over the last quarter century. Because of various water conservation efforts and housing development

trends, today's average customer uses twenty to twenty-five percent less water than in 1980. In fact, though WASD has 65,000 more retail water customer today than it had fifteen years ago, it sells less water. This steady decline in per capita demand, which has had an immense impact on WASD revenues, shows no signs of abating.

For some time now, WASD has defined the average customer as a residential consumer using 7,500 gallons per month. While this is a convenient way of analyzing the impact of changes to the rate schedule, it does not well-reflect the continuing impact of conservation on customer charges. As noted above, recent data suggests today's average customer consumes closer to 6,750 gallons per month. If we adjust not only for rate changes, but for declining use levels as well, the average WASD customer actually pays less today for water and sewer services than eight years ago. This extraordinary fact is not at all reflected in national data; as previously mentioned, the average urban consumer nationwide is paying approximately thirty percent more today over the identical period.

The compounding effects of conservation are important when establishing successful, long-term rate structures and adjustment mechanisms. For years, various utilities, particularly in the electricity markets, have employed rate indexes that counterbalance the effects of conservation and inflation. We will continue to work with WASD to explore the issue of conservation and the ways in which utilities have employed adjustment mechanisms.

### **REVENUE/EXPENSE STABILIZATION**

Current revenue streams are not sufficient to maintain our water and sewer system. Consequently, WASD is now using various reserves and one-time revenues to balance its annual budget. This includes withdrawing funds from the Rate Stabilization Fund and the Water and Sewer General Reserve Fund, and utilizing cash invested in the debt service reserves. It also includes the potential sale and leaseback of WASD's Douglas Road facility. (We will continue to explore options for effecting this transaction to determine whether it would be financially advantageous to the County.) Without employing even greater rate increases than those currently being proposed to the Board, our projections indicate that withdrawals and one-time fund sources will continue to be needed.

We are suggesting three actions to help secure the appropriate minimum level of resources for maintaining our current standards for clean water and properly treated wastewater.

- Equity Return Discontinuation: Discontinue payments from WASD to the County's General Fund by the end of FY 2005-06.
- Maintenance Index: Institute rate schedule adjustments, either annually or quarterly, to correspond to the Water and Sewerage Maintenance charges, as tracked by the Commerce Department for the Consumer Price Index, commencing in FY 2006-07.
- Rate Structure Adjustments: Institute rate schedule adjustments to help address the decadelong period of no rate increases and deferred infrastructure maintenance programs.

### Equity Return Discontinuation

For several years, the County's General Fund has received an equity return from WASD that comports with state statute and common practice. This return is separate from the normal interdepartmental charges for services. The equity payment will be discontinued by the end of Fiscal Year 2005-06.

### Maintenance Index

The United States Department of Commerce tracks water and sewer charges across the nation as part of the Consumer Price Index. We propose to introduce a *Maintenance Index* that would adjust rates quarterly based on the Department of Commerce's Water and Sewerage Maintenance rate information. This index would link changes to the average water and sewer customer bill to those of the national average.

Many types of indexes are used throughout utility industries; notably, many electric utilities employ an adjustment mechanism known as a "decoupler." These mechanisms make rate adjustments based on actual average customer charges, not those of a pre-defined average customer. Decouplers help counterbalance the natural swings in utility sales volumes and revenues, as those caused by weather patterns in the short-term, and conservation in the long-term. A *Maintenance Index* could be designed to increase rate adjustments if average charges begin to drop due to weather fluctuations, and decrease rate adjustments if average charges begin to rise above inflation.

### Rate Structure Increase

WASD's financial advisors, Public Financial Management (PFM), and its Bond Engineers are in agreement that the WASD rate schedule needs substantial revision. In accordance with the Master Bond Ordinance, PFM and our Bond Engineers have produced written reviews of WASD's financial state of affairs; these are available upon request. The recommended rate adjustments' impact on departmental revenues, R&R funding and reserves, as well as on WASD's customers, is summarized below:

Impact of Recommended Rate Adjustments	%	\$
WALL Service Management of the Control of the Contr		
Budgeted Revenue Increase	15.8	<b>5</b> 8.5m
Total Francisco Co. Do. D. C.	Contracts of a	
Total Funding for R& R Projects Including Revenue Increases		70m
Total Transfers from Reserves Budgeted Including Revenue Increases  Rate Stabilization Fund		
General Reserve	-	33.6m
Odicial Reserve	_	24.8m
Customer Impact  Retail Customers (total cost at 6,750 gallons / month)	8.86	2.55
Wholesale Customers (rate per 100 gallons)		
Hialeah / Miami Springs		
Water	41.67	.30
Sewer	16.47	.28
Other Municipalities		
	40.00	.34
Water		_28
	16.47	.20
Water	16.47	.20

### **Retail Rates**

Our proposed retail rate increase was designed to address historically under priced rates white minimizing the impact to "lifeline" customers using less than 3,750 gallons of water per month, as well as to the average customer using 6,750 gallons per month. The proposed increase maintains the current inclining rate structure, with per gallon charges (and percentage increases) rising as monthly consumption escalates. This structure rewards conservation efforts and minimizes the impact of rate increases on customers who consume in moderation.

The proposed increase is expected to generate an additional \$33.4 million from retail sales. Attachment 1, which was previously provided to members of the infrastructure and Land Use Committee at its August 16 meeting, indicates the proposed increases to base meter charges and per gallon charges at various consumption levels. The total increase to the "lifeline" customer's bill (3,750 gallons per month) is projected to be \$0.99 per month, while the expected increase to the average customer's bill (6,750 gallons per month) is \$2.55 per month. Further details are provided in the attachments to this memorandum.

### Wholesale Rates:

The proposed increase in wholesale service rates is expected to generate an additional \$15.2 million, and realigns the contractual formulas that determine rates to wholesale customers in order to bring the charges up to the actual cost of delivering service. The net effect of the proposed adjustments for wholesale entities buying both water and wastewater services is a 24.3 percent increase; further details are provided in the attachment.

It should be noted that the proposed wholesale adjustments should result in significantly smaller impacts on the retail bill of the end user (absent any additional increases imposed by the municipality). Wholesale water and sewer charges are limited elements of the final bill for citizens receiving water and sewer services from the fifteen municipal providers. Across nine municipalities (Homestead, Hialeah, North Miami Beach, Coral Gables, Opa-Locka, North Miami, Miami Beach, and Miami Springs) the average residential consumer would see a total bill increase of between six and thirteen percent.

As we further develop the parameters of the proposed *Maintenance Index*, we may suggest to the Board that the index be used in possible combination with the contractual cost allocation formulas to establish future wholesale rate adjustments.

### **Future Outlook**

We have proposed to the Board rate adjustments that put WASD in a fundamentally balanced financial position for the next three years. Facing ever-expanding service demands, however, and operating in an environment perpetually susceptible to regulatory change, WASD will be in a continual struggle to properly project and fund its capital program. We will continue to keep the Board apprised of the Department's future capital needs, and of all potential impacts associated with regulatory change.

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# Water and Sewer Department Proposed Rate Adjustment for FY 05/06

### Water

je Godina i se	2000 M M 11 1940 M	(10)	211.195	* 4/10 PA	10 10 10 10 10 10 10 10 10 10 10 10 10 1				100 May 100 Ma	40 110 Bit 12 14 14 14 18 18 10 11 10 11 10 11 10 11 10 11 10 11 10 11 10 11 10 11 10 11 10 11 10 11 10 11 10	100.631%	
Monthly Base Charge an <b>*</b>   * * * * * * * * * * * * * * * * * *	\$3.52	\$7.87	\$12.27	\$26.24	\$55.99	\$87.45	\$139.92	\$244.86	\$524.70	\$991.10	\$1,865.60	
Monthly Etcerrent	\$3.20	\$7.15	\$11,15	\$23.85	\$50.90	\$79.50	\$127.20	\$222.60	\$477.00	\$901.00	\$1,696.00	
	2/8"	1"	1.5"	2"	3"	4"	6"	 	10"	12"	14"	

# Water and Sewer Department Proposed Rate Adjustment for FY 05/06

### Wastewater

	*		Revised Rates		The state of the s
	AND TO STATE OF				
Mognette see eo Onerese			\$3.25	\$3.58	30.08
Rate Block # 1	0	3,750	\$1.85	\$1.94	
Rate Block #2	3,751	12,750	\$2.90	\$3.34	15%
Rate Block #3	12,751	Över	\$3.60	\$4.32	20%

## Water and Sewer Department Proposed Rate Adjustment for FY 05/06

# Monthly Cost of Increase for Average Customer

;	Wa	iter	Waste	stewater		Total	
Gallons per month	Current	Revised	Current	Revised	Current	Revised	Change
	·						281112
6,750	\$9.88	\$10.44	\$18.89	\$20.88	\$28.76	\$31.31	10 11 00 47
						)	

## Miami-Dade County Summary Information on Selected County Boards

Carried Superior Control of the Cont	2T	<del></del>					······
Reporting Routing Bre Estalishing	Annual report addressing five topics specified in the establishing ordinance.	Prepare an annual report to the SCC.	Provide a status report to the BCC no less than two times per year (number of phones collected, distributed, number of applications received from eligible recipients, and costs of administering the program).	Publish a final report with regard to each matter reviewed and transmrit is simultaneously to the BCC, the County Manager and the director of the department concerned.	Copies of all Minutes and Resolutions to be filed with the dicark of the Board within 30 days of the meeting. Annual report to the BCC summarking all programs and activities.	None mentioned in ordinance.	None mentioned in ordinance. Ordinaires provides for independent annual audit of all proceeds of SNP bonds.
	None	"To advise the Board of County Commissioners as to the issues and concerns testing people with disabilities and to recommend to it those ordinances and resolutions that address the issues that foster independence, empowerment, and equity within the community at large."	None	No formal mission statement, Rules of Procedure includes a Statement of Purpose: To feedlate the independent review process in Miami-Dade County, Florida which shall be based on dure regard for the Constitutional Replace, and which shall bromate the Highest possible degree of mutual respect between the agencies, Instrumentalities and employees of Miami-Dade County and the people of Miami-Dade County and the people of Miami-Dade County and the people	To attract, promote, and retain amateur apording events for Miami- pade County. As the premier destination for sports events, leave and Copies of all Minutes and Resolutions to be filed with the entertainment in South Florids, organd is to fest positive growth and Clerk of the Board within 30 days of the meeting. Annual economic development for the local community through increased visitor stay and more frequent visitor return rate.	The Park and Recreation Citizens Advisory Committee is established for the purpose of providing the Board of County Commissioners and the Park and Recreation Department with recommendations to assist the County in its origing afforts to limprove and promote its park facilities and programs.	The Safe Neighborhood Parks (SNP) Citizans Oversight Committee shall oversee deposit and fabrusensor of Bond proceeds; other evaluate and rark solicitations; recommend Great wards; oversee Great management (process; appropriately conduct meetings and disobarge responsibilities; and perform such other functions set forth in the SNP Ordinance.
	General Fund	Office of ADA Coordination Budget	General Fund	County General Fund and ad	Receives \$250,000 from the County and projects to generate an additional \$250,000 from private sources to include membership and sponsorability sevenue once appropriate programs and events have been fully developed	General Fund Budget of the Park and Recreation Department	Interest earnings from the sale of SNP Bonds
	FY 2004: \$39,000 FY2005: \$41,000	FY2004 Indirect Coast; \$49,700 plus 25% for fringe banefits plus 25% for fringe Coasts; \$54,700 plus 25% for fringe banefits	No direct operating cost, but an inclined operating cost of \$97,000 (salary and fringe benefits, for one support staff person)	Direct and Indirect costs: FY 03- 04: \$463,000 FY 04-05: \$520,000	Expenses directly related to the board of directors will be less than \$1,000 in FY04-05. Total operating budget is projected to be \$970,000	Direct Costs (FY2004); \$305 Indirect Costs; \$3,000	FY 2004 Operating Cost: \$436,000
BCE Date and Astlan Taken Asolish, Controls Redrifts	5/17/05 Continue	4/5/05 Continue	4/5/05 Continue	4/5/05 Continue	4/5/05 Continue	4/5/05 Continue	4/5/05 Continue
Data Renom	01/19/05	02/22/06	02/05/05	02/15/05	1/19/015	02/15/05	02/16/06
Date train Sunsat Review Report Received	3 1	02/22/05	1/6/05, 2/3/05	02/08/05	01/18/05	01/25/06	02/16/05
Board.	General Government	Internal Support	Internal Support	General Government	Culture and Recrestion	Culture and Recreation	Culture and Recreation
Paparment Contact	PLANNING & ZONING Paula Church or Rodion thancauk 305-375-2835	OFFICE OF ADA COORDINATION Ilene Hyams 305-375- 2012 Office of ADA Coordination	COMMUNICATIONS Cire Andino 306-375-3948 Carmen Williams - Program Coord, 306-375-	INDEPENDENT REVIEW PANEL Sagario Lopez 305-375- 4880	MIAMI-DADE SPORTS COMMISSION Mike Sophe 305-603-3251 or 305-903-4473 (Cell) 701 Brickell Avenue, Suite 2700 Miami, FL 33131	PARK AND RECREATION Zoraida Yanes 305-755- 7846	OFFICE OF SAFE COUNTY MANAGER COUNTY MANAGER Vernita Thomas 305-971- 5055 or 305-871-5058
Posed	AGRICULTURAL PRACTICES STUDY ADVISORY BOARD	COMMISSION ON DISABILITY ISSUES	DIAL-A-LIFE PROGRAM ADVISORY AND OVERSIGHT BOARD	INDEPENDENT REVIEW PANEL.	MIAMI-DADE SPORTS COMMISSION	PARK AND RECREATION CITIZENS' ADVISORY COMMITTEE	SAFE NEIGHBORHOOD PARKS CITZENS' COMMITEE

Attachment A